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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/736,617	12/13/2000	Douglas S. Makofka	18926-004400US	8900

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EXAMINER

SALCE, JASON P

ART UNIT	PAPER NUMBER
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2611

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/736,617

Applicant(s)

MAKOFKA ET AL.

Examiner

Jason P Salce

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 2 and 4-7.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statements (IDS) submitted on 8/26/02, 4/23/01, 7/16/01, 2/13/02 and 5/6/03 were filed after the filing date of the instant application on 12/13/00. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner is considering the information disclosure statement.

### ***Specification***

2. The disclosure is objected to because of the following informalities: On page 15, Line 1, "printer port resource 916" should read "printer port resource 914" in order to be consistent with Figure 9.

Appropriate correction is required.

### ***Drawings***

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 824, 820, 814, and 1016. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the

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changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Objections***

4. Claims 6, 12 and 20 are objected to because of the following informalities: The term "streaming content functional units" should read "non-streaming content functional units". The specification describes streaming media to be volatile and functional units to be non-volatile; therefore it would be impossible to have streaming content functional units since the specification defines that functional units only support non-streaming video and audio (see Page 4, Second Paragraph of the applicant's specification).

Appropriate correction is required.

Claim 3 is objected to because of the following informalities: Line 3 of the claim reads, "functional unit identifier" and should read, "functional unit". The claim refers to authorizing the use of the actual functional unit and not the functional unit identifier, which is the data that identifies the functional unit that must be authorized for use.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1, 3-6, 8, 10, 12-13, 15 and 17-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Safadi et al. (U.S. Patent No. 6,256,393).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Referring to claim 1, Safadi discloses receiving first information comprising a plurality of functional unit identifiers (see Column 4, Lines 1-3 for creating a fingerprint (digital signature) for each software object) and one or more tier requirements respectively related to each functional unit identifier (see Column 4, Lines 35-36 for associating a fingerprint for each software object with a service tier).

Safadi also discloses receiving second information comprising tier rights (see Column 5, Lines 1-4 and Column 6, Lines 42-48 for the use of an EMM in order to provide access to a downloaded option or a specific resource at the set-top box). Also note that the EMM is specifically associated with authorization rights.

Safadi also discloses correlating the functional unit identifiers to their respective tier requirements (see Column 5, Lines 16-44 for correlating the fingerprints to the service tier and adding additional data according to which controller (National or Local) is used, and incorporating the data into an entitlement control structure (ECS)). Also

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note that the ECS is specifically associated with access requirements (see Column 5, Lines 41-44).

Safadi also discloses interacting with the functional unit (see Column 7, Lines 22-25 for downloading or utilizing an object).

Safadi also discloses determining if the respective tier requirements are satisfied by the tier rights (see Column 7, Lines 22-25 for comparing the authorization rights (EMM) against the authorization requirements (ECS)).

Safadi also discloses authorizing further interaction with the functional unit (see Column 9, Lines 15-17 for authorizing permission to interact with a functional unit).

Referring to claim 3, Safadi discloses that more than one of the tier rights could authorize further interaction with the functional unit (see Column 5, Lines 1-4 for authorization tiers for which a user has been authorized in conveyed in an EMM, therefore since multiple tiers are authorized, then more than one of the tier rights of the EMM can be used to authorize interaction with a functional unit). Also note Column 5, Lines 5-15 for two types of tiers, which can be authorized for use. Also note Column 6, Lines 64-67 and Column 7, Lines 1-2 for sending an EMM to the set-top box with multiple "access rights" for accessing services and objects.

Referring to claim 4, Safadi discloses authenticating a source of at least one of the first and second information (see Column 4, Lines 8-10 for encrypting the fingerprint (first information) and Column 8, Lines 21-31 for authenticating that the fingerprint was sent from specific source at the set-top box).

Referring to claim 5, Safadi discloses that the functional unit comprises a discrete entity comprising software (see Column 3, Lines 53-55 for the set-top box utilizing a software object (functional unit)).

Referring to claim 6, Safadi discloses receiving a plurality of non-streaming content functional units (see Page 4, Third Paragraph of the applicant's specification for a functional unit being a software program (object), therefore the software object disclosed by Safadi at Column 3, Lines 53-55 is a functional unit). Also note that the functional unit can only be "non-streaming content" as opposed to "streaming content" disclosed in claim 6 (see objection to claim 6 above).

Referring to claim 8, see the rejection of claim 1. Also note that a set top box is taught by Safadi in Figure 1 (element 350a) and that a functional unit is associated with the set top box (see Column 3, Lines 53-55). Also note that the requirements message and rights message are disclosed in the rejection of claim 1 as the first and second information, respectively.

Referring to claim 10, Safadi discloses a data channel between a headend and the set top box (see Column 3, Lines 59-64 for interaction between a headend (NAC or LAC) and a set top box and Column 4, Lines 35-38 for a satellite or cable communications path), wherein the data channel is bi-directional (see Column 7, Line 29 for requesting download of a software object and Column 7, Lines 63-65 for downloading the software object upon approval). Therefore, since a request is being sent (upstream) and a download is being received (downstream), then the communications path is bi-directional.

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Referring to claim 12, see the rejection of claim 6.

Referring to claim 13, see the rejection of claim 5.

Referring to claim 15, Safadi discloses determining first and second information ((see Column 4, Lines 1-3 and 35-36 for determining the first information (fingerprint and service tier (grouping of services)) and Column 5, Lines 1-4 for determining the second information (EMM)) to modify authorization of a remotely located and functional unit (see Column 7, Lines 49-65 for authorizing downloading a remotely located software object and Column 9, Lines 8-18 for authorizing access to the remotely located software object that has been approved for download).

Safadi also discloses sending the first information comprising a functional unit identifier and at least one tier requirement related to the functional unit identifier (see the rejection of claim 1 for sending the fingerprint and tier requirement data).

Safadi also discloses sending the second information comprising a tier right (see the rejection of claim 1 for sending the EMM containing the tier rights).

Safadi also discloses causing modification of an authorization state of the remotely located functional unit corresponding to the functional unit identifier (see again Column 7, Lines 49-65 for determining if the state of authorization requires the software object to be downloaded or not).

Referring to claim 17, Safadi teaches an authorized and unauthorized state (see Column 7, Lines 50-62 to determine if downloading a software object is authorized or not authorized).



Referring to claim 18, see the rejection of claim 4. Also note that the fingerprint of the first information (see the rejection of claim 1) is a digital signature.

Referring to claim 19, see the rejection of claim 3.

Referring to claim 20, see the rejection of claim 6.

Referring to claim 21, see the rejection of claim 5.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2, 11 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Safadi et al. (U.S. Patent No. 6,256,393) in view of Maillard (U.S. Patent No. 6,393,562).

Referring to claim 2, Safadi discloses receiving third information (see Column 8, Lines 58-63 and Column 9, Lines 10-17 for receiving an EMM each time a resource is requested from a software object), but fails to teach that the third information replaces the tier rights.

Maillard also teaches the distribution of multiple EMMs, which replaces a previously sent EMM with a current EMM (according to the date information) (see Column 6, Lines 53-55 and Lines 60-64 and Column 7, Lines 10-16 and Lines 22-29 for replacing tier rights data of a previous EMM data with the current EMM data).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the set top box, as taught by Safadi, using the EMM data verification receiver, as taught by Maillard, for the purpose of preventing fraudulent access in a conditional access system linked to a subscriber's receiver/decoder (see Column 1, Lines 9-10 of Maillard).

Referring to claim 11, see the rejection of claim 2.

Referring to claim 16, see the rejection of claim 2. Also note that Safadi discloses further modification of the authorization state of the remotely located and functional unit corresponding to the functional unit identifier (see Column 9, Lines 8-18 for determining if the state of authorization requires the software object to be accessed or not). The examiner notes that the further modification step is not dependent upon the third information replacing a tier right, therefore the examiner has interpreted the further modification of the remotely located (downloaded from a headend) and functional unit (software object) corresponding to the functional unit identifier (fingerprint) by the EMM sent to the set-top box to enable access to the software object.

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7. Claims 7 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Safadi et al. (U.S. Patent No. 6,256,393) in view of Dyer (U.S. Patent No. 6,305,019).

Referring to claim 7, Safadi discloses a set top box (element 350a in Figure 1), but fails to disclose that the set top box is integral with an enclosure for a display (integrated inside a television).

Dyer discloses integrating a set top box within a television (see Column 14, Lines 35-40).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to modify the set-top box, as taught by Safadi, to be integrated inside a television, as taught by Dyer, for the purpose of forming a single consumer electronics product (see Column 14, Lines 36-37 of Dyer) which would reduce the amount of space taken up at the consumer premises.

Referring to claim 14, see the rejection of claim 7.

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8. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Safadi et al. (U.S. Patent No. 6,256,393) in view of Wasilewski et al. (U.S. Patent No. 6,157,719).

Referring to claim 9, Safadi discloses authentication of a source of the requirements message (see the rejection of claim 4 for authentication of the ECS), but fails to teach authentication of the rights message (EMM).

Wasilewski also teaches a conditional access system similar to Safadi that transmits EMMs to a user for authentication (see Column 4, Lines 5-8). Wasilewski also teaches that the EMMs can be encrypted (see Column 6, Lines 60-64), therefore authenticating data sent from a specific source (see Column 7, Lines 1-6).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the rights message (EMM), as taught by Safadi, by utilizing encryption of the EMM, as taught by Wasilewski, for the purpose of protecting

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information that is transmitted by means of a wired or wireless medium against unauthorized access (see Column 1, Lines 53-55 of Wasilewski).

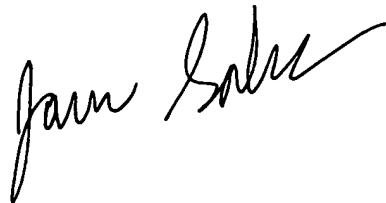
***Conclusion***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason P Salce whose telephone number is (703) 305-1824. The examiner can normally be reached on M-Th 8am-6pm (every other Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on (703) 305-4755. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

September 8, 2004

A handwritten signature in black ink, appearing to read "Jason Salce", is written over the date.